

## ABSTRACT

The invention provides a condition detecting sensor capable of measuring the distance between two members moving toward and away from each other without using changes in capacitance, as well as a condition detecting sensor capable of reliably sensing objects located between these two members regardless of their permittivity. The sensor comprises a first antenna FANT and a second antenna MANT arranged, respectively, on each of the two members moving toward and away from each other, a generator SOSC generating signal waves that can be transmitted by the first antenna FANT, and a mixer MIX connected to the first and second antennas FANT, MANT and mixing signals, and senses the distance between the two members moving toward and away from each other, as well as the presence of objects between the two members, by sensing the standing wave ratio between the first and second antennas FANT, MANT using a band-pass filter BPF and an S-meter SM.